

## OIB - P-3 Orion 04/11/17 Science Report

**Aircraft:**

[P-3 Orion](#) ([See full schedule](#))

**Date:**

Tuesday, April 11, 2017

**Mission:**

OIB

**Mission Location:**

CryoVex-2

**Mission Summary:**

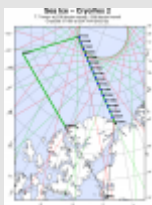
Mission: CryoVex-2 (priority: high; new line)

This mission is a coordinated flight with the CryoVex experiment. It is similar to the first CryoVex mission flown on 03/24/17, also from Thule. This second mission is a coordination with a Christian Haas-led in-situ campaign along the same line (York Univ., Canada). In addition to Level 1 Requirements SI1 and SI2, the mission addresses sea ice level 1 baseline requirement SI4 and SI9 by coordinating the mission with both CryoSat-2 and the CryoVex effort. In this case, we followed CryoSat-2 track 37179 on a descending flight. To maximize the science return from this mission and best expand our geographical coverage of Arctic sea ice, we also flew most (~3/4) of the northern portion of the high-priority North Canada Basin mission prior to joining the CryoSat-2 track at ~88°N and following on a southeasterly course.

Cloudy conditions persisted across northwestern Greenland today. We flew through a haze across Nares Strait and part of Ellesmere Island, but were able to collect ATM T5 narrow scan data over most of Ellesmere Island at high altitude. We then descended to survey altitude and encountered mostly clear conditions over lots of consolidated sea ice with relatively few leads for most of the mission. We passed over the CryoVex team and their Twin Otter at about 37159N just off nadir. Before overflying Alert, we circled once to deconflict from a Canadian C-17 landing there. Finally, we crossed over Nares Strait, Washington Land, icebergs discharged from Humboldt Glacier and Inglefield Land before at mostly high altitude returning to Thule. All instruments performed well today with no issues reported. ATM estimates 98% data collection, despite the occasional haze and higher altitudes. John Farrell, executive director of the US Arctic Research Commission, joined the flight today.

**Images:**

### Map of today's mission



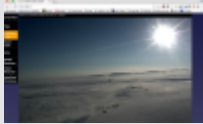
[Read more](#)

### Sea ice along the coast of Ellesmere Island



[Read more](#)

## Forward cam image of Alert, Canada



[Read more](#)

## DMS nadir image of Alert, Canada



[Read more](#)

## P-shaped valleys in Inglefield Land, Greenland



[Read more](#)

### Submitted by:

Joseph MacGregor on 04/19/17

### Related Flight Report:

## P-3 Orion 04/11/17

### Flight Number:

Science Flight #20- CryoVex 2 (High Priority)

### Payload Configuration:

OIB Arctic

### Nav Data Collected:

No

### Total Flight Time:

7.8 hours

### Submitted by:

Kelly Griffin on 04/12/17

### Flight Segments:

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	04/11/17 11:05 Z	<b>Finish:</b>	04/11/17 18:55 Z
<b>Flight Time:</b>	7.8 hours		
<b>Log Number:</b>	<a href="#">17P006</a>	<b>PI:</b>	Nathan Kurtz
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		

### Flight Hour Summary:

	<b>17P006</b>
<b>Flight Hours Approved in SOFRS</b>	333.6
<b>Total Used</b>	307.1

**Total Remaining**

26.5

**17P006 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">02/24/17</a>	Airworthiness Test Flight	Check	1	1	332.6
<a href="#">02/26/17</a>	Project Test Flight #1	Check	4.9	5.9	327.7
<a href="#">02/27/17</a>	Project Test Flight #2	Check	3	8.9	324.7
<a href="#">03/07/17</a>	Transit Flight	Transit	8.2	17.1	316.5
<a href="#">03/09/17</a>	Science Flight #1 - North Pole Transect	Science	8	25.1	308.5
<a href="#">03/10/17</a>	Science Flight #2 - Laxon Line	Science	8.5	33.6	300
<a href="#">03/11/17 - 03/12/17</a>	Science Flight #3 - Chukchi West Line	Science	8	41.6	292
<a href="#">03/12/17 - 03/13/17</a>	Science Flight #4 - North Beaufort Loop Line	Science	8.1	49.7	283.9
<a href="#">03/14/17 - 03/15/17</a>	Science Flight #5 - East Beaufort Loop Line	Science	8	57.7	275.9
<a href="#">03/20/17</a>	Science Flight #6 - Sea Ice South Basin Transect (to Thule)	Science	8.1	65.8	267.8
<a href="#">03/22/17</a>	Science Flight #7 - North Flux 02	Science	7.9	73.7	259.9
<a href="#">03/23/17</a>	Science Flight #8 - Zig Zag West Line	Science	7.9	81.6	252
<a href="#">03/24/17</a>	Science Flight #9 - CryoVEx Line	Science	5.8	87.4	246.2
<a href="#">03/27/17</a>	Science Flight #10 - Northwest Coastal A Line	Science	7.4	94.8	238.8
<a href="#">03/28/17</a>	Science Flight #11 - North Central Cap 01 Line	Science	7.6	102.4	231.2
<a href="#">03/29/17</a>	Science Flight #12 - Ellesemere Island 01 Line	Science	7.6	110	223.6
<a href="#">03/30/17</a>	Science Flight #13 - Ellesemere South Line	Science	7.9	117.9	215.7
<a href="#">03/31/17</a>	Science Flight #14- Alexander-Petermann Line	Science	6.5	124.4	209.2
<a href="#">04/03/17</a>	Science Flight #15- Zachariae 79N Fram Straight and BGTL ENSB Transit	Science	7.4	131.8	201.8
<a href="#">04/05/17</a>	Science Flight #16 - Svalbard North Line (High Priority)	Science	7	138.8	194.8
<a href="#">04/06/17</a>	Science Flight #17- Svalbard South Mission (High Priority)	Science	8.5	147.3	186.3
<a href="#">04/07/17</a>	Science Flight #18- Combined Zig Zag East Mission and Transit ENSB to BGTL	Science	8.3	155.6	178
<a href="#">04/10/17</a>	Science Flight #19- North Central Gap 3	Science	7.8	163.4	170.2
<a href="#">04/11/17</a>	Science Flight #20- CryoVex 2 (High Priority)	Science	7.8	171.2	162.4
<a href="#">04/12/17</a>	Science Flight #21-Northwest Coastal C	Science	7.2	178.4	155.2
<a href="#">04/13/17</a>	Science Flight #22-North Glaciers 02 Prime (High Priority)	Science	8.2	186.6	147
<a href="#">04/14/17</a>	Science Flight #23-IceSat-2 North/CryoSat-2 SARIn	Science	7	193.6	140
<a href="#">04/17/17</a>	Science Flight #24-Humboldt 01(High Priority)	Science	7.8	201.4	132.2

<a href="#">04/19/17</a>	Science Flight #25-Sea Ice - South Canada Basin (MediumPriority)	Science	7.8	209.2	124.4
<a href="#">04/20/17</a>	Transit Flight to Kangerlussuaq	Transit	3	212.2	121.4
<a href="#">04/21/17</a>	Science Flight #26-Southeast Coastal	Science	8	220.2	113.4
<a href="#">04/22/17</a>	Science Flight #27-Helheim-Kangerd	Science	7.8	228	105.6
<a href="#">04/24/17</a>	Science Flight #28-Geikie 01 (High Priority)	Science	8	236	97.6
<a href="#">04/26/17</a>	Science Flight #29-Devon-Bylot (Medium Priority)	Science	7.9	243.9	89.7
<a href="#">04/28/17</a>	Science Flight #30-Penny 01 (Medium Priority)	Science	6	249.9	83.7
<a href="#">04/29/17</a>	Science Flight #31-Thomas - Jakobshavn 01	Science	8.4	258.3	75.3
<a href="#">05/01/17</a>	Science Flight #32-Thomas - Jakobshavn-Eqip-Store	Science	8.4	266.7	66.9
<a href="#">05/02/17</a>	Science Flight #33-Thomas - ICESat-2 Central	Science	7.9	274.6	59
<a href="#">05/03/17</a>	Science Flight #34-Thomas - Southwest Coastal A	Science	8.3	282.9	50.7
<a href="#">05/05/17</a>	Science Flight #35-Helheim-Kangerdlugssuaq Gap B (High Priority)	Science	8.2	291.1	42.5
<a href="#">05/06/17</a>	Science Flight #36-Helheim-K-EGIG-Summit	Science	8	299.1	34.5
<a href="#">05/08/17</a>	Science Flight #37-Southeast Glaciers 01 (High Priority)	Science	8	307.1	26.5

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

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